

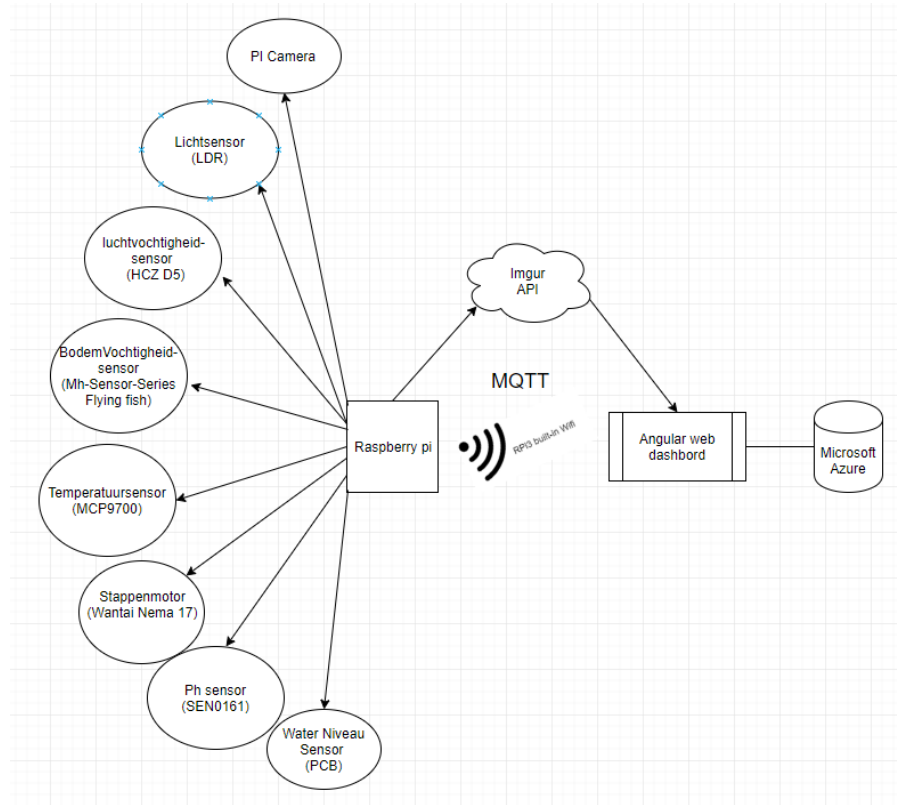
Lab Farm 2



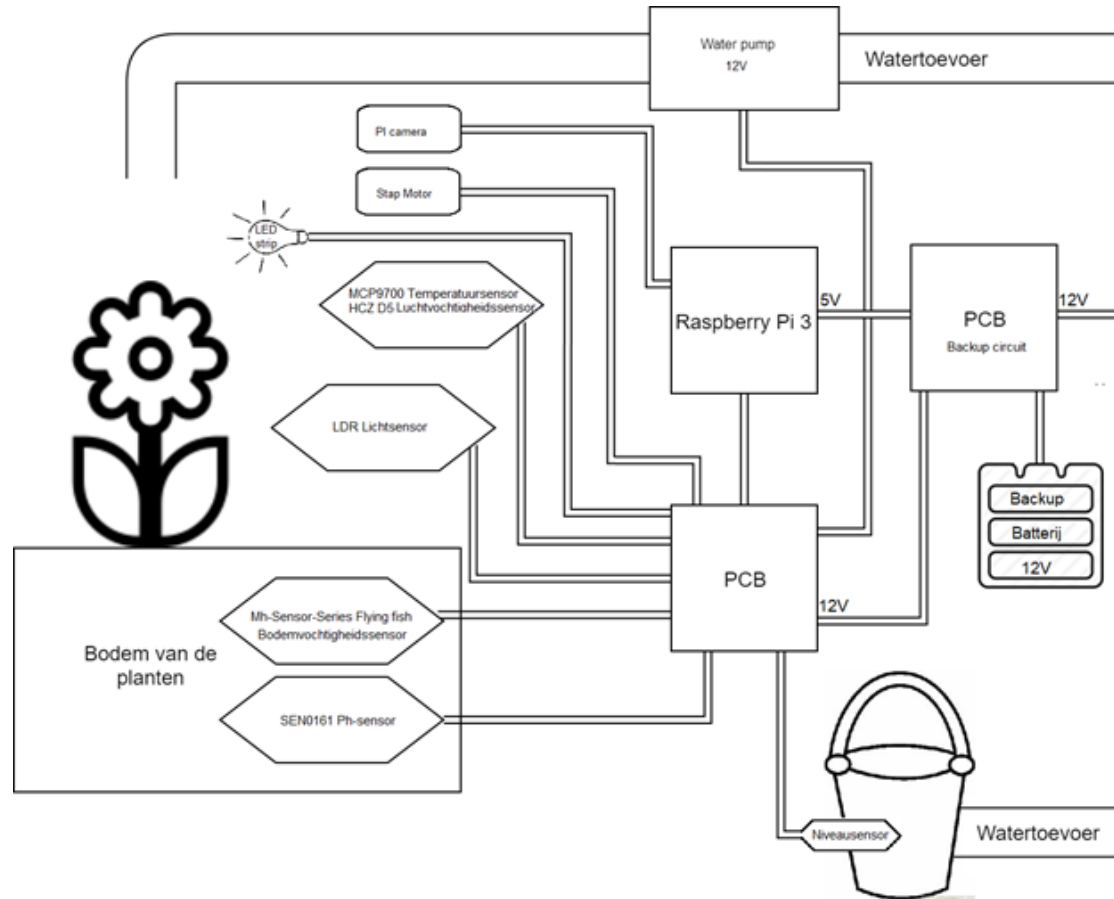
Taakverdeling

- | | | |
|----------------------|----------------------|-------------------|
| • Seppe De Beule | ⇒ Plant Conditioning | ⇒ Web Dashboard |
| • Sam Van Bogaert | ⇒ Plant Conditioning | ⇒ Sensoren |
| • Inias Somers | ⇒ Plant Robot | ⇒ PCB |
| • Kevin Van de Vyver | ⇒ Plant Robot | ⇒ Constructie |
| • Raymond Mohammad | ⇒ Project Manager | ⇒ API |
| • Gilian Sterckx | ⇒ Camera | ⇒ Beeldherkenning |

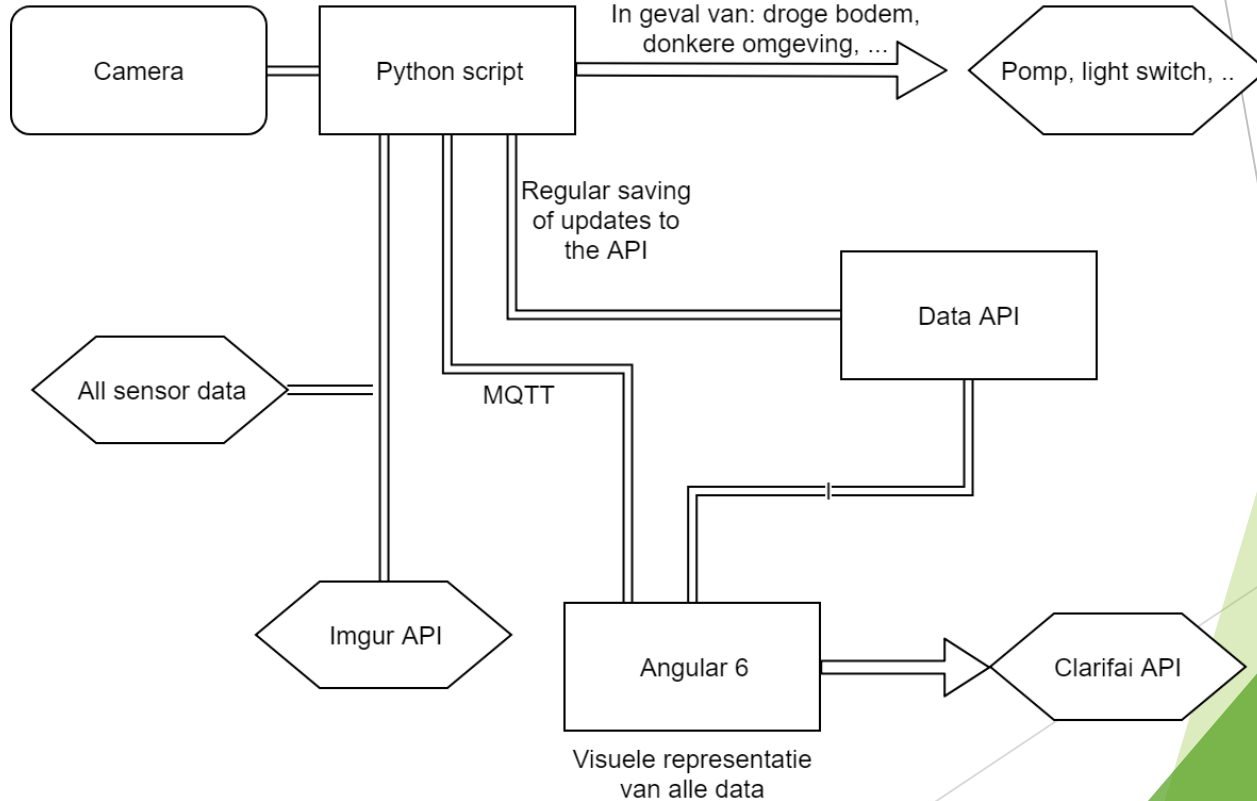
Algemene architectuur



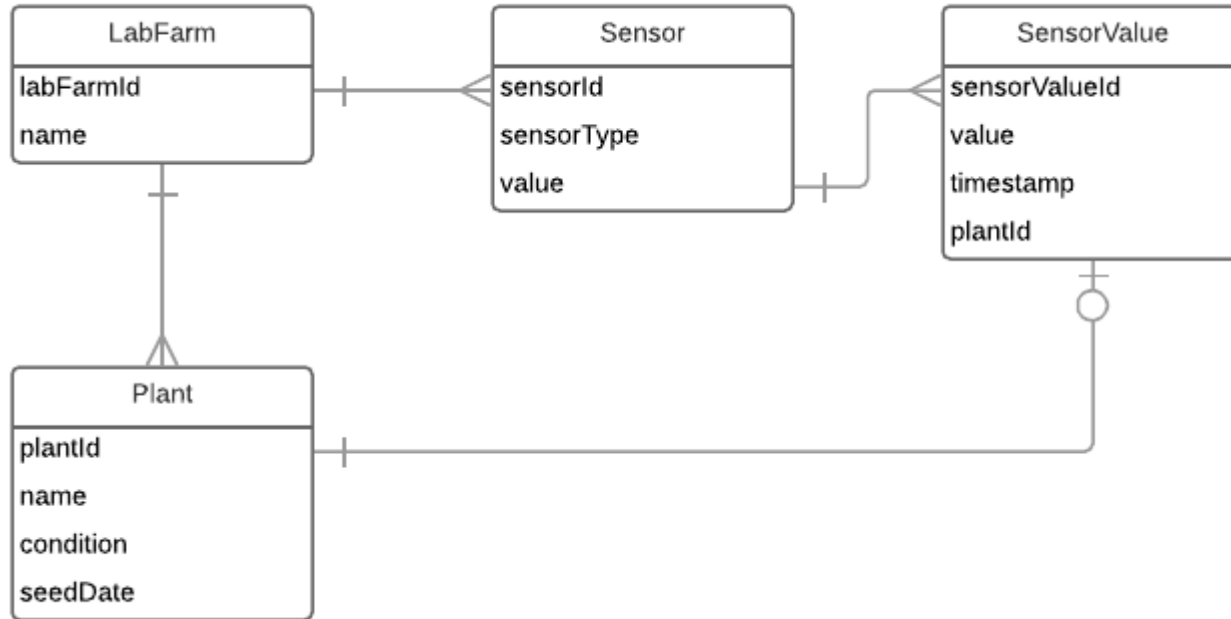
Hardware diagram



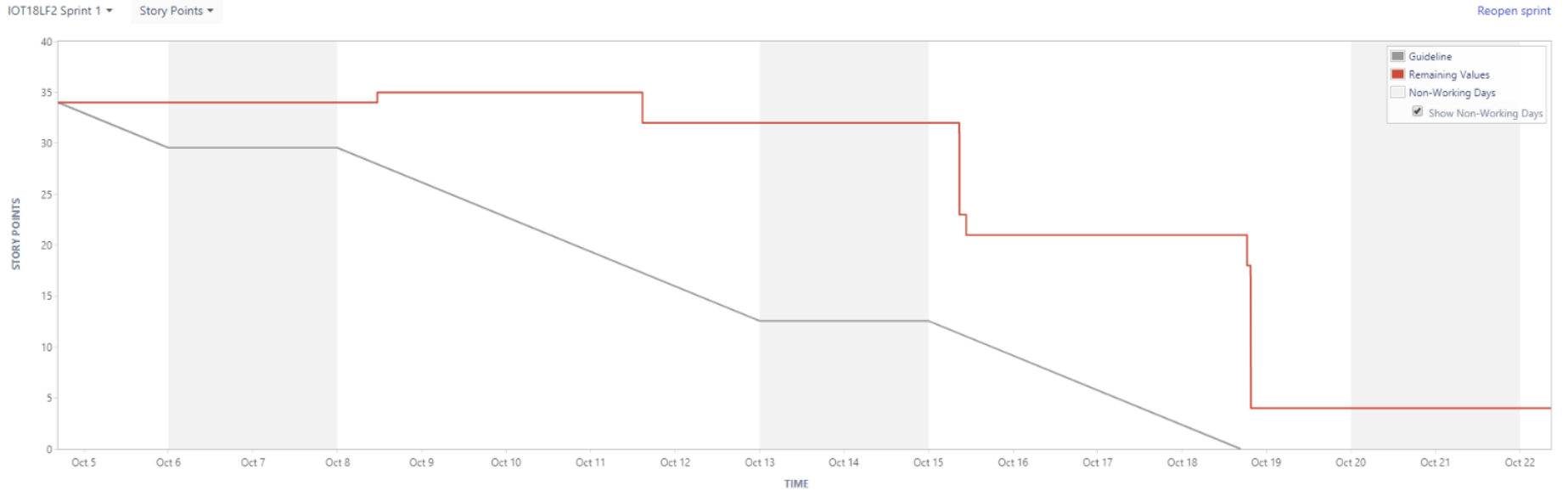
Software diagram



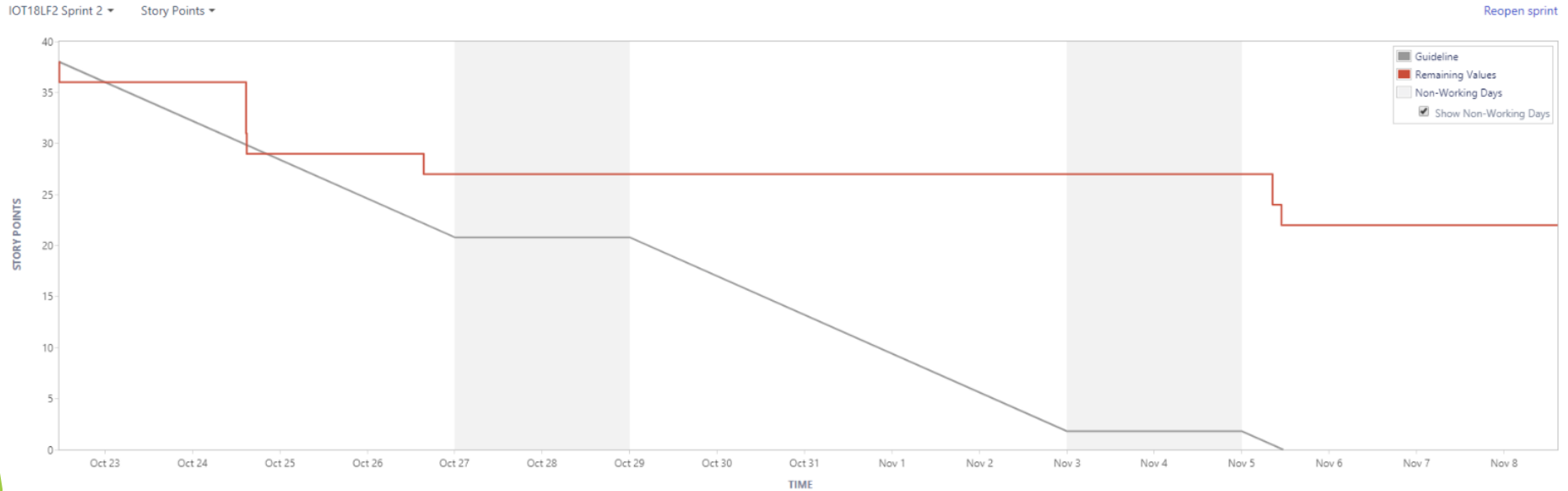
Database



Sprint 1 (04/oct/2018 - 22/oct/2018)



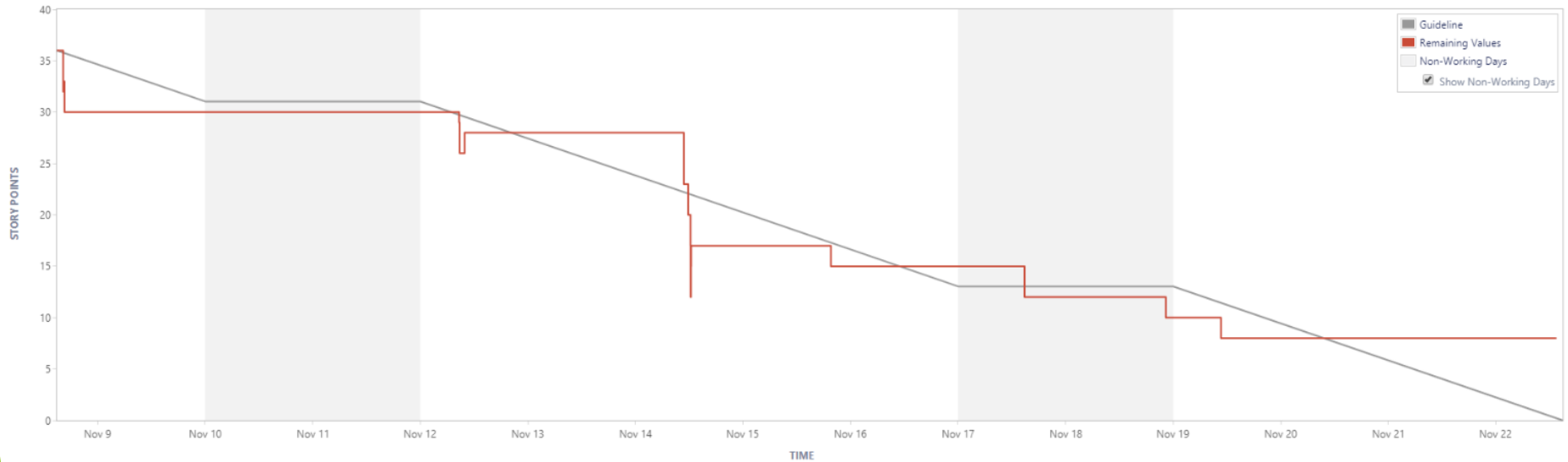
Sprint 2 (22/oct/2018 - 08/nov/2018)



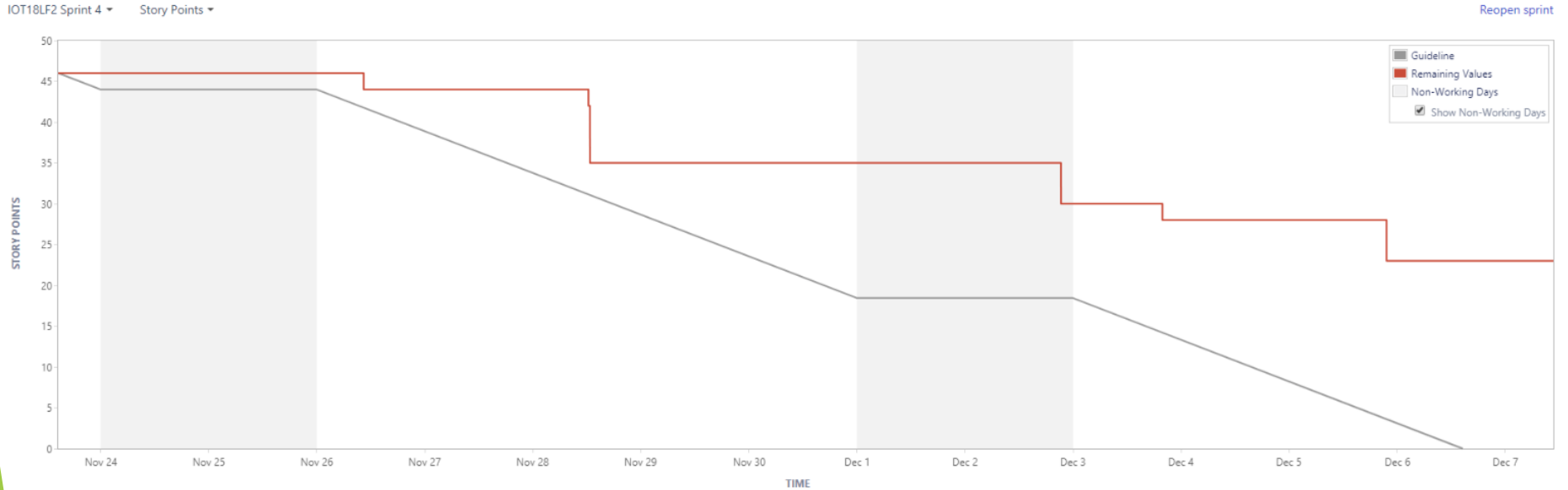
Sprint 3 (08/nov/2018 - 22/nov/2018)

IOT18LF2 Sprint 3 ▾ Story Points ▾

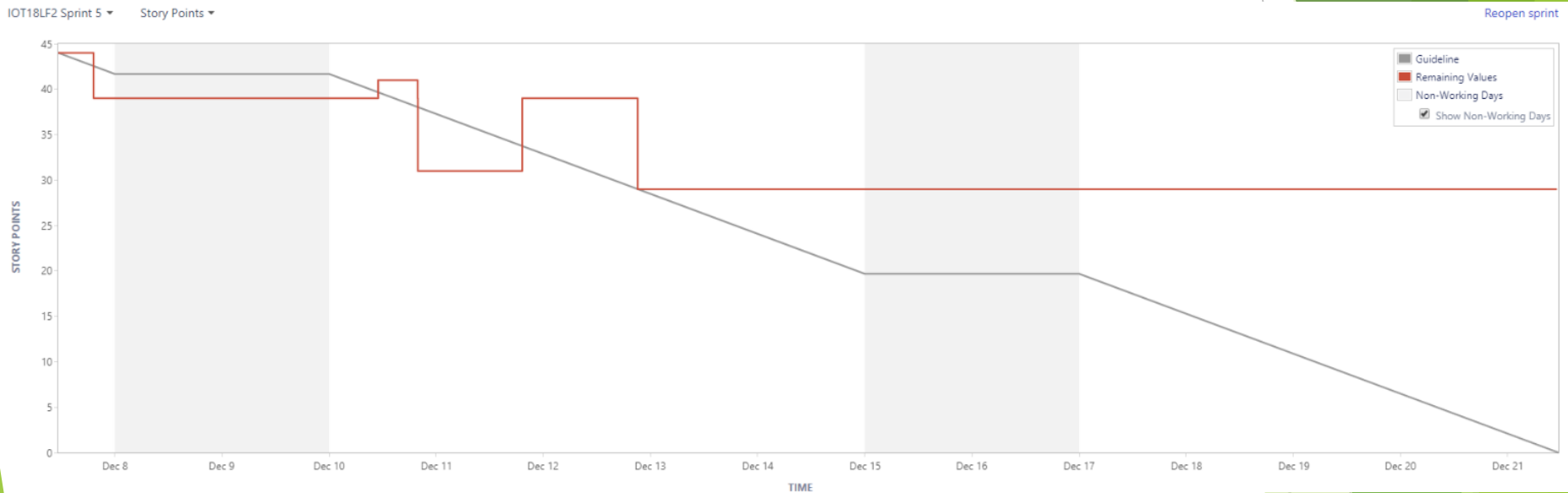
[Reopen sprint](#)



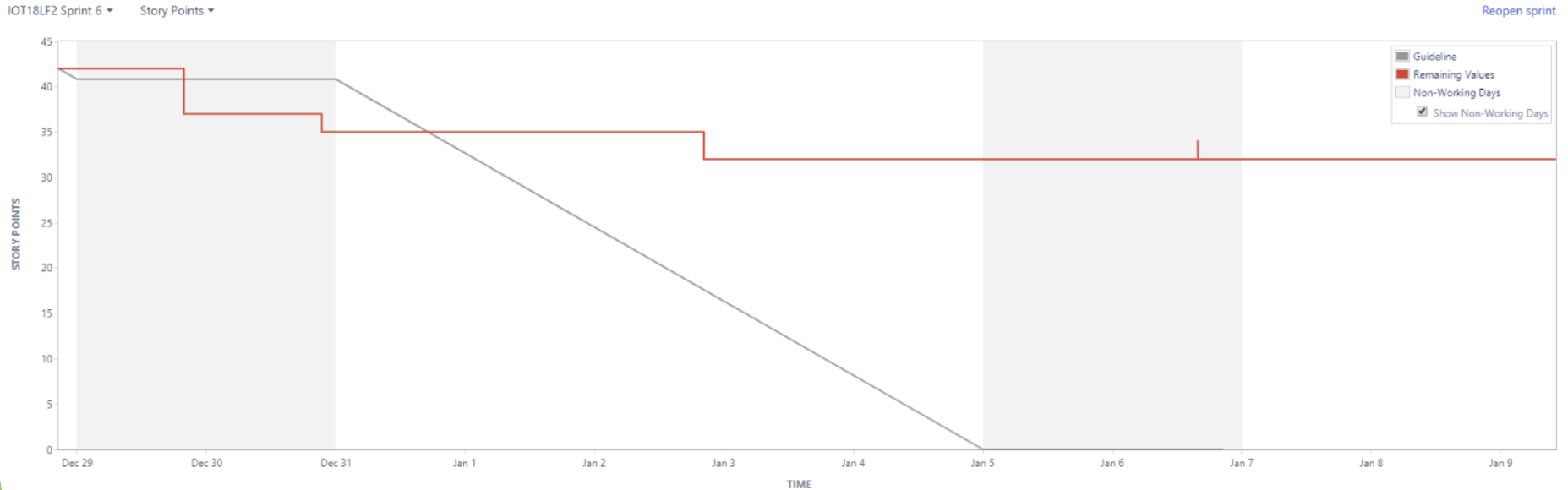
Sprint 4 (23/nov/2018 - 07/dec/2018)



Sprint 5 (07/dec/2018 - 21/dec/2018)



Sprint 6 (28/dec/2018 - 09/jan/2019)



Sprint 7 (10/jan/2019 - 22/jan/2019)

- Stappenmotor constructie afgewerkt
- Sensoren overschakelen van breadboard op pcb
- http post & mqtt verbinding via rpi naar dashboard
- Filteren op datum in dashboard en api
- (camera)

Niet afgewerkte stories

📌 ↑ IOT18LF2-32 As a user I want to be able to toggle the lights

📌 ↑ IOT18LF2-5 As a user I want to manually give my plant water through the web dashboard

📌 ↑ IOT18LF2-31 As a user I want the plantcontainer to receive light when necessary

📌 ↑ IOT18LF2-17 As a user I want the plantcontainer to automatically give my plant water when necessary

📌 ↑ IOT18LF2-61 As a user, I want the pump the water from the reservoir to a specific plant

Dashboard

- Beheer van alle sensorische gegevens
- Manueel besturen van: motor, pomp & lamp
- Notifications bij anomalieën
- Bekijken van gemaakte foto's etc.

The screenshot shows the 'LabFarm 2' dashboard with a dark theme. At the top is a navigation bar with links: Home, Beeldherkenning, Vochtigheid, pH-waarde, Temperatuur, Licht, and Besturing. On the left is a sidebar with sensor labels: Lamp, Temperatuur: °C, Luchtvochtigheid: %, Bodemvochtigheid: %, Licht: Lumen, pH-waarde, and Water. The main content area is titled 'Besturing' and contains three sections: 'Fysiek' with a 'Lamp' toggle and 'Motor links'/'Motor rechts' buttons; 'Beeldherkenning' with a 'Neem manueel een foto van:' label and 'Plant 1', 'Plant 2', and 'Plant 3' buttons; and 'Waterpomp' with a table of manual water dispensing controls for three plants. A red notification box at the bottom left displays two alerts: 'De luchtvochtigheid is laag. (25.12%)' and 'De bodem is zeer zuur (pH 0)'.

Waterpomp			
Geef plant 1 manueel	10	ml water	Uitvoeren
Geef plant 2 manueel	10	ml water	Uitvoeren
Geef plant 3 manueel	10	ml water	Uitvoeren

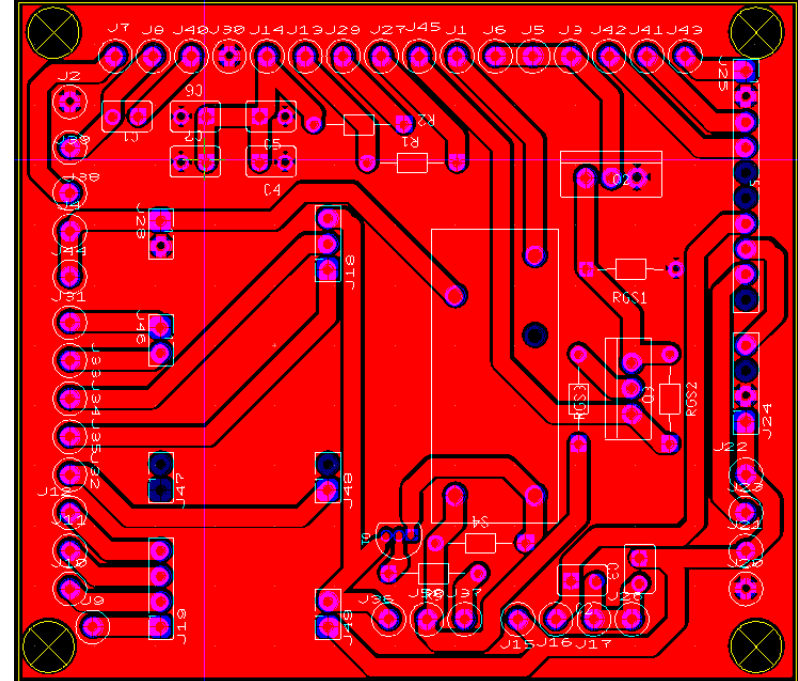
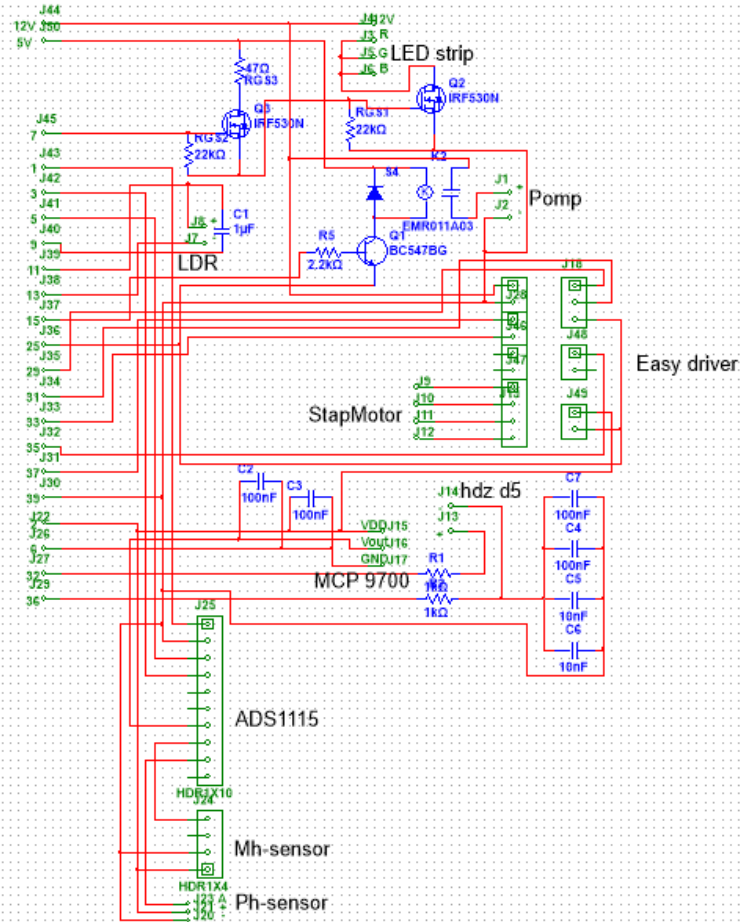
De luchtvochtigheid is laag.
(25.12%)

De bodem is zeer zuur (pH 0)

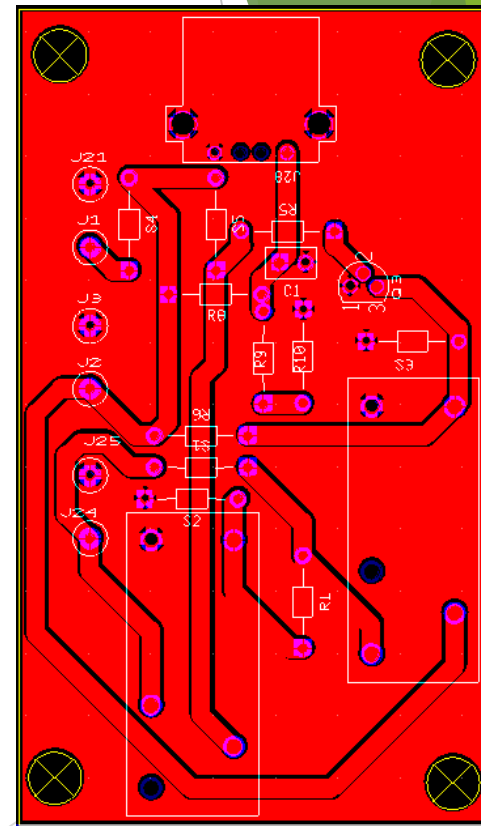
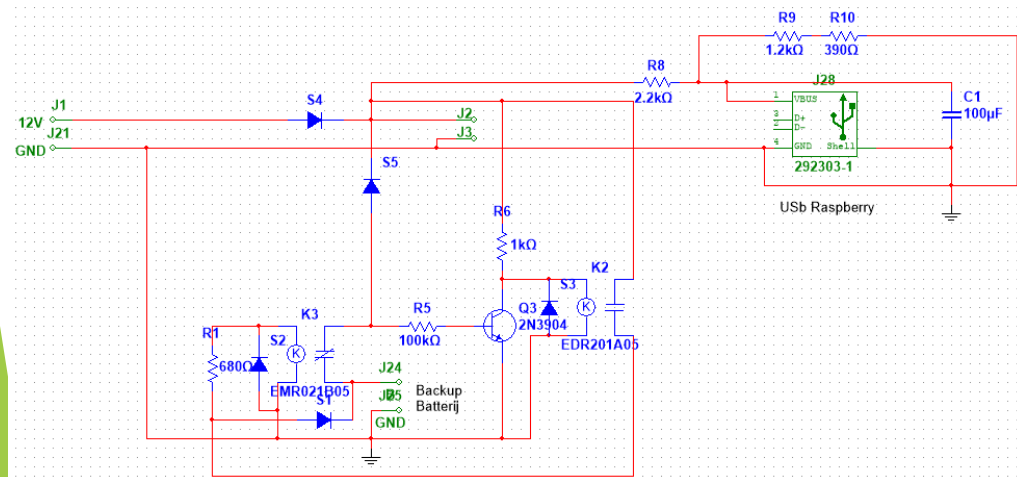
API

- Gepublished op Azure
- Maakt connectie met Angular dashboard en Raspberry Pi script
- RESTful
- Filteren per categorie (datum, sensor, ..)

PCB



PCB backup circuit



Raspberry Pi Script

- Sensoren aansturen
- Doorsturen van inkomende data naar dashboard en API
 - http post - tabellen op het dashboard
 - mqtt - sidebar van het dashboard

Camera

- Upload afbeeldingen naar Imgur albums
- Laad deze afbeeldingen in op het dashboard
- Bekijk de geschiedenis van de plant
 - Handmatig
 - Animatie

**DEMO
TIME**